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(303) 978-2000Case Docket No. 7189
Date: April 18, 2007Mail Stop Appeals - Patents
COMMISSIONER OF PATENTS
PO Box 1450
Alexandria, VA 22313-1450Re: Application of: Wiryecz et al
Serial No.: 09/996,454
Filed: November 20, 2001
For: DESIGN EFFECT FIBERGLASS WALLCOVERINGSArt Unit: 1771
Examiner: GOFMAN, Anna

Transmitted herewith is/are the following document(s) related to the above-identified application:

- ☐ Notice of Appeal
- ☒ Appeal Brief
- ☐ Request for Oral Hearing

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Attorney Docket No. JM 7189

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In re Patent Application of)	
Thomas WIRYCZ et al.)	Group Art Unit: 1771
Application No.: 09/996,454)	Examiner: Anna Gofman
Filed: November 20, 2001)	Confirmation No.: 2430
For: DESIGN EFFECT FIBERGLASS)	
WALLCOVERINGS)	

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APPEAL BRIEF

Mail Stop APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This appeal is from the final Office Action mailed November 27, 2006, and the Advisory Action mailed January 16, 2007, rejecting claims 1-3, 5-20, and 24-26, which are reproduced as the Claims Appendix of this brief.

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I. Real Party in Interest

Johns Manville Europe GmbH is the real party in interest and the assignee of the present application.

II. Related Appeals and Interferences

The Appellant's legal representative, or assignee, does not know of any other appeal or interferences which will affect or be directly affected by or have bearing on the Board's decision in the pending appeal.

III. Status of Claims

The final rejection of pending claims 1-3, 5-20, and 24-26 is hereby appealed.

IV. Status of Amendments

No claim amendments were filed subsequent to final rejection.

V. Summary of Claimed Subject Matter

Independent Claim 1 is directed to a process of manufacturing a designed fiberglass wall covering comprising providing a fiberglass fabric; impregnating the glass fabric by applying a chemical dispersion to the glass fabric wherein said chemical dispersion is provided as a water based dispersion comprising starch and a polymeric binder; drying the treated glass fabric; subsequently forming a first image coating on one side of said treated glass fiber fabric by selectively applying a hydrophobic primary image coating to a portion of the treated glass fabric; subsequently forming a second image coating on said first image coating by selectively applying the coating to a portion of the treated glass fabric, said coating applied from a chemical mixture consisting essentially of a polymeric binder and expandable chemicals, with said second coating being capable of creating distinct image pattern upon heating; and heating the glass fabric to expand the expandable chemicals and

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thereby create a three-dimensional image pattern. (See, for example, Page 4, Lines 15-22, and Original Claims 4 and 23, of the present specification).

Independent Claim 24 is directed to a process of manufacturing a designed glass fiber wall covering comprising: (a) applying a chemical dispersion comprising a starch, a polymeric binder and optionally a pigment and/or a cross-linking agent to a glass fiber fabric; (b) subsequently applying to selected areas on one side of the treated fabric of step (a), a first image layer comprising a hydrophobic coating selected from a hydrophobic binder or varnish; (c) subsequently applying a second image coating to selected areas of the first image layer applied in step (b), said second image coating consisting essentially of a polymeric binder and expandable microspheres; and (d) subjecting the coated glass fiber fabric obtained in step (c) to an elevated temperature to expand the microspheres and create a three-dimensional image pattern. (See, for example, Page 4, Lines 15-22; Page 8, Lines 1-3; and Page 13, Lines 11-28, of the present specification).

VI. Grounds of Rejection to be Reviewed on Appeal

A. Claims 1-3, 5-20, and 24-26 were finally rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,291,011 ("Edlund") in view of U.S. Patent No. 4,902,722 ("Melber").

The Examiner cites Edlund as disclosing a method of producing a fiberglass wallcovering similar to claim 1. The Examiner acknowledges that Edlund does not teach applying a second image coating of expandable material. The Examiner cites Melber as teaching a syntactic foam material, comprising polymeric binder and expandable microspheres, that can be applied to any suitable medium to provide graphic representations, including wallcovers and fiberglass. The Examiner argues that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the image coating step of Melber in addition to the processing steps of Edlund in order to provide a graphic representation to the wall covering, as taught by Melber.

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B. Claims 1-3, 5-20, and 24-26 were finally rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,291,011 ("Edlund") in view of U.S. Patent No. 4,433,022 ("Schwartz").

The Examiner cites Edlund as disclosing a method of producing a fiberglass wallcovering similar to claim 1. The Examiner acknowledges that Edlund does not teach applying a second image coating of expandable material. The Examiner cites Schwartz as teaching a three-dimensional printed ceiling board facing material in which a foam-coated fabric is selectively printed with an expandable print paste, that upon heating the expandable coating is substantially increased in size and bonded to the coated substrate, and that the print pastes contain microspheres. The Examiner argues that it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the image coating step of Schwartz in addition to the processing steps of Edlund, motivated to provide a graphic representation to the wallcovering, as taught by Schwartz.

VII. Argument

Appellant respectfully disagrees with the rejections of claims 1-3, 5-20, and 24-26 as unpatentable over Edlund in view of Melber and Edlund in view of Schwartz. Therefore, reversal of these rejections is respectfully requested.

The process of the present invention produces a decorative wallcovering having a first hydrophobic layer applied to selective portions of the impregnated fabric in the form of a decorative pattern and a second layer applied to selective portions of the fabric in the form of a foamed three-dimensional image pattern. The product is designed to be applied to a wall and may subsequently be painted to create colorful three-dimensional designs of an infinite variety.

The process of Edlund involves the initial application of a hydrophilic layer over the entire surface of a glass fiber fabric followed by the application of a hydrophobic layer in a decorative pattern on selected portions of the hydrophilic layer. After application to a wall surface, the conditioned, partially decorated wallcovering is painted. Since the surface of the wallcovering has discontinuous hydrophobic and hydrophilic areas, the finished painted product exhibits distinctive decorative images as exemplified in Figure 3 of Edlund. Accordingly, it is an important feature of Edlund that the process described therein produces

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a "conditioned" intermediate product having a significant area with hydrophilic properties as well as patterned hydrophobic areas. When subsequently painted, the resultant product is a finished wallcovering with distinctive contrasting patterns as a result of applying the paint to hydrophilic and hydrophobic areas.

A. Motivation

Edlund does not disclose the presently claimed step of providing a three-dimensional decorative foamed pattern by heating a mixture of expandable chemicals. The Examiner alleges that it would have been obvious to so modify the process of Edlund in view of Melber or Schwartz. Respectfully, Appellant disagrees.

Melber and Schwartz both disclose the application of an expandable coating to a fibrous substrate followed by heating to produce a three-dimensional foamed decorative layer on the substrate. Neither Melber nor Schwartz discloses applying the expandable coating to an already-decorated substrate.

In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The motivation to modify the relied on prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. *In re Napier*, 55 F.2d 610, 613, 34 USPQ2d 1782, 1784 (Fed. Cir. 1995). Obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the modification. *In re Geiger*, 815 F.2d 686, 688, USPQ2d 1276, 1278 (Fed. Cir. 1987).

The teachings of Melber and Schwartz may establish that expandable coatings to provide three-dimensional decorative effects were known in the art. They provide no suggestion, however, to add a step of using an expandable coating to the process of Edlund. As stated in *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000),

Most if not all inventions arise from a combination of old elements. . . .
Thus, every element of a claimed invention may often be found in the prior art. . . . However, identification in the prior art of each individual part

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claimed is insufficient to defeat patentability of the whole claimed invention. . . . Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [Citations Omitted].

Edlund is directed to a feasible and economic process to produce an intermediate rolled good product, which when applied to a wall and painted by a consumer, will display a distinct and decorative image effect. (Column 2, Lines 9-13). Accordingly, Edlund provides a glass yarn fabric product suitable for subsequent application to walls or structures, which fabric is coated and conditioned such that later application of paint results in a desired and selective image effect. (Column 2, Lines 17-21). The product of Edlund possesses the same benefits and favorable properties as untreated standard glass fiber wallcovering, with the added benefit of producing paint effects in a user selected color. (Column 4, Lines 29-33). The Examiner acknowledges that "Edlund does not teach applying a second image coating of expandable material." (See Office Action mailed June 22, 2006, Paragraph 3, Page 2, and Paragraph 4, Page 3).

The Examiner asserts that one of ordinary skill in the art would have been motivated to modify Edlund in view of Melber or Schwartz in an attempt to achieve the presently claimed process. In particular, the final Office Action asserts, "[A] person of ordinary skill in the art would have been motivated to apply the coating of Melber or Schwartz to the substrate of Edlund with the expectation that this would *further enhance* the decorative appearance of the wallcovering of Edlund." (Emphasis Added; Paragraph 4, Page 3).

However, the Examiner has failed to identify where in the prior art one of ordinary skill would have found a disclosure or suggestion which would have led him to make the proposed modification. See *Kotzab*, 27 F.3d at 1371, 55 USPQ2d at 1317. In this regard, Appellant notes that the application of paint to the glass yarn fabric product of Edlund results in *desired and selective* image paint effects in a *user selected* color. The absence of particular findings as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected the components for combination in the manner claimed, in support of the rejection of claims 1-3, 5-20, and 24-26 renders the rejections improper.

An adequate showing of motivation to combine requires evidence that a person of ordinary skill in the art would, confronted with the same problems as the inventor and with no knowledge of the presently claimed process, would select the elements from the cited

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prior art references for combination in the manner claimed. *Ecolochem Inc. v Southern Calif. Edison Co.*, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075 (Fed. Cir. 2000), quoting *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998).

The Examiner has not shown that the skilled artisan confronted with obtaining wall coverings with distinct image effects with three-dimensional finish structures, would have selected the features from Melber or Schwartz and combined them with Edlund absent knowledge of the presently claimed process. Specifically, as noted above, Edlund already provides a product that when applied to a wall and painted by a consumer displays a distinct and decorative image effect. Because the only reason or suggestion to modify Edlund comes from Appellant's disclosure, the rejection is improper and should be reversed.

According to the Examiner, it would have been obvious to use the image coating step of Melber or Schwartz in the process of Edlund. However, applying the expandable coating of Melber or Schwartz to the partially decorated, "conditioned" wallcovering of Edlund would cover the hydrophilic areas which would be unavailable for subsequent painting and would be contrary to the objectives of Edlund.

Appellant submits that there is no disclosure in the cited art which would have motivated those of ordinary skill in the art to modify the process of Edlund to include the step of Melber or Schwartz. Nor could one have reasonably expected that such a modification would have been successful, bearing in mind that applying an expandable coating to the partially imaged fabric of Edlund would undoubtedly cover the hydrophilic areas which are designed to be painted by the consumer to effect a final decorative effect.

For at least the above reasons, Appellant believes the rejection based on Edlund in view of Melber or Schwartz is unsound and should be reversed.

B. Principle of Operation

The final Office Action additionally contends,

Edlund intends to create a substrate to which *decorative material* can be applied. Melber and Schwartz each teaches a *decorative material* which can comprise dyes and pigments and which can be applied to substrates in order to decorate them. Therefore, to apply the *decorative coating* of Melber or Schwartz to parts of the substrate of Edlund would not be contrary to the invention of Edlund

(Emphasis Added; Paragraph 5, Page 3).

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The Examiner has asserted that "the material of Edlund is intended to be painted". (Office Action mailed June 22, 2006, Paragraph 5, Page 4). As described in the specification of Edlund, FIG. 3 depicts examples of the finished image produced following painting of the treated glass fiber wallcovering. (Column 4, Lines 25-27).

As explained in MPEP § 2143.01, Section VI., if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Appellant further respectfully submits that since the proposed application of the *syntactic foam material* of Melber or the *expandable or foamable coating* of Schwartz to parts of the substrate of Edlund would change the principle of operation of Edlund (*i.e.*, *painting* of a hydrophobic image coating of a glass yarn fabric product to produce a desired and selective image effect), the teachings of the references are not sufficient to render the claims *prima facie* obvious.

The final Office Action also similarly contends, "[T]he motivation to make the combination would come from the fact that Edlund teaches a substrate onto which *decorative coatings* can be applied and Melber and Schwartz teach particular *decorative coatings* which can be applied to substrates in order to impart a textured, aesthetically appealing decoration onto the substrate." (Paragraph 6, Page 4).

Appellant respectfully submits that the proposed combination of Edlund with Melber or Schwartz would change the principle of operation of Edlund for the reasons discussed above. Edlund provides a product that when applied to a wall and painted by a consumer displays a distinct and decorative image effect. Thus, the combination Melber or Schwartz with Edlund is unnecessary to "to impart a textured, aesthetically appealing decoration onto the substrate [of Edlund]."

For at least the above reasons, Appellant believes the rejection based on Edlund in view of Melber or Schwartz is unsound and should be reversed.

C. Second Image Coating

1. Claims 1-3, 5-17-20, 24, and 26

The presently claimed second image coating is "applied from a chemical mixture consisting essentially of a polymeric binder and expandable chemicals" (claim 1), or

"consist[s] essentially of a polymeric binder and expandable microspheres" (claim 24). In contrast, the formulation set forth in Example I of Melber contains thermosetting acrylic latex binder and pre-expanded microspheres. No expandable chemicals or microspheres are present in this pre-expanded formulation. The expandable compositions set forth in Examples II, III and IV of Melber contain expandable microspheres, pre-expanded microspheres, water and an unspecified vehicle. No polymeric binders are present in these expandable formulations.

Additionally, as explained in the present specification, "The secondary image coating contains chemicals or chemical mixtures which expand or chemically react upon the application of heat." (Page 10, Lines 10-11). Further, "During the heat treatment the expandable chemicals of the image coating react and cause the coating to expand. Induced by the chemical reaction and the expansion of the coating, a well distinguishable volumetric pattern can be created." (Page 11, Line 28 – Page 12, Line 2, of the present specification).

The addition of pre-expanded microspheres as disclosed in Melber to the presently claimed coating compositions containing expandable chemicals or microspheres would be detrimental to the desired properties of said coating compositions (*i.e.*, expansion upon the application of heat to create a well distinguishable volumetric pattern). Thus, claims 1 and 24, which recite "consisting essentially of" a polymeric binder and expandable chemicals or microspheres, exclude the presence of pre-expanded microspheres in the second image coating, as pre-expanded microspheres would materially affect the basic and novel characteristics of the presently claimed processes of manufacturing a designed glass fiber wall covering. See MPEP § 2111.03.

Claims 2-3, 5-17, 19 and 20 depend, or ultimately depend, from claim 1, and thus, contain all the limitations of claim 1, while Claims 18 and 26 depend from claim 24, and thus, contain all the limitations of claim 24.

2. Claim 25

Claim 25 depends from claim 24, and thus, contain all the limitations of claim 24. Additionally, claim 25 specifies that the second image coating consists essentially of 20% to 80% of a polymeric latex binder and 5% to 40% of expandable microspheres, the percentages based on the dry weight of the coating. Again, no expandable microspheres are present in the pre-expanded formulation of Example I of Melber, and no polymeric binders are present in

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the expandable formulations of Examples II, III and IV of Melber, let alone in the amount set forth in claim 25.

For at least the above reasons, Appellant believes the rejection based on Edlund in view of Melber is unsound and should be reversed.

VIII. Claims Appendix

See attached Claims Appendix for a copy of the claims involved in the appeal.

IX. Evidence Appendix

See attached Evidence Appendix for copies of evidence relied upon by Appellant.

X. Related Proceedings Appendix

See attached Related Proceedings Appendix for copies of decisions identified in Section II., *supra*.

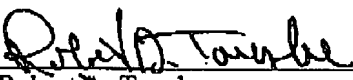
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VIII. CLAIMS APPENDIX

The Appealed Claims

1. A process of manufacturing a designed fiberglass wall covering comprising:
 - (a) providing a fiberglass fabric;
 - (b) impregnating the glass fabric by applying a chemical dispersion to the glass fabric wherein said chemical dispersion is provided as a water based dispersion comprising starch and a polymeric binder;
 - (c) drying the treated glass fabric;
 - (d) subsequently forming a first image coating on one side of said treated glass fiber fabric by selectively applying a hydrophobic primary image coating to a portion of the treated glass fabric;
 - (e) subsequently forming a second image coating on said first image coating by selectively applying the coating to a portion of the treated glass fabric, said coating applied from a chemical mixture consisting essentially of a polymeric binder and expandable chemicals, with said second coating being capable of creating distinct image pattern upon heating; and
 - (f) heating the glass fabric to expand the expandable chemicals and thereby create a three-dimensional image pattern.
2. The process of claim 1 wherein the fiberglass fabric is a woven or non woven fabric.
3. The process of claim 1 wherein the chemical dispersion is applied in a continuous impregnation process.
5. The process of claim 1 wherein the chemical dispersion comprises also a crosslinking agent.

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6. The process of claim 1 wherein the chemical dispersion comprises a mixture of potato starch, vinyl acetate ethylene copolymer, and an ammonium zirconium cross-linker.

7. The process of claim 6 wherein the potato starch comprises 65-75%, the vinyl acetate ethylene copolymer 20-30%, and ammonium zirconium cross-linker 2-6% of dry substance total, further wherein the coating is water based and has a dry substance percentage in the chemical bath of between 3 and 15 weight percent.

8. The process of claim 1 wherein the drying of the treated and/or coated glass fabric is accomplished in an air dryer or by contact drying on heated cylinders.

9. The process of claim 1 wherein the selective applying of hydrophobic primary image coating is accomplished with a rotating screen applicator.

10. The process of claim 1 wherein the hydrophobic primary image coating comprises a hydrophobic binder or varnish.

11. The process of claim 10 wherein the binder or varnish comprises ethylene vinyl acetate copolymer.

12. The process of claim 11 wherein the binder or varnish further comprises a thickener and a de-foamer.

13. The process of claim 12 wherein the binder or varnish further comprises a coloring pigment.

14. The process of claim 1 wherein the hydrophobic primary image coating comprises a paint or a water based paint.

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15. The process of claim 14 wherein the paint is a metallic paint.
16. A process according to claim 1 wherein said polymeric binder of the second image coating is an acrylic latex binder.
17. A process according to claim 1 wherein said expandable chemicals of the second image coating also contains rheology modifier and de-foaming agents.
18. A process according to claim 24 wherein said second image coating also contains rheology modifier and de-foaming agents.
19. A process according to claim 1 wherein said chemical mixture of the second image coating also includes pigments.
20. A process according to claim 1 wherein the application of said chemical mixture of the second image coating is accomplished through the use of a rotating screen applicator.
24. A process of manufacturing a designed glass fiber wall covering comprising:
- (a) applying a chemical dispersion comprising a starch, a polymeric binder and optionally a pigment and/or a cross-linking agent to a glass fiber fabric;
 - (b) subsequently applying to selected areas on one side of the treated fabric of step (a) above, a first image layer comprising a hydrophobic coating selected from a hydrophobic binder or varnish;
 - (c) subsequently applying a second image coating to selected areas of the first image layer applied in step (b) above, said second image coating consisting essentially of a polymeric binder and expandable microspheres; and
 - (d) subjecting the coated glass fiber fabric obtained in step (c) above to an elevated temperature to expand the microspheres and create a three-dimensional image pattern.

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25. The process according to claim 24, wherein the second image coating consists essentially of 20% to 80% of a polymeric latex binder and 5% to 40% of expandable microspheres, the percentages based on the dry weight of the coating.

26. The process according to claim 24, wherein the coated glass fiber fabric obtained in step (d) is subsequently dried, cut into desired lengths and widths, and collected in roll form.

Claims Appendix - 4

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IX. EVIDENCE APPENDIX

NONE

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X. RELATED PROCEEDINGS APPENDIX

NONE

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